

Westphal.7276
Serial Number 10/647,912

- 1.(Currently Amended) A gear arrangement, comprising a first gear made of a first material and a second gear made of a second material wherein the first and second gears are adjacent on a common shaft and the elasticity of the first gear is chosen to be greater than that of the second gear while the strength of the second gear is chosen to be greater than that of the first gear, wherein the first gear and the second gear sit loosely on the shaft such that the first and second gears rotate independently.
2. (Withdrawn) The gear arrangement of claim 1, comprising a third gear made of the same material as the first gear and that sits loosely on the common shaft, on the side of the first gear that is still free.
3. (Withdrawn) The gear arrangement of claim 1, wherein the first and third gears are made of plastic while the second gear having less elasticity but greater strength is made of metal.
4. (Withdrawn) The gear arrangement of claim 2, wherein the first and third gears are metallic while the second gear is made of plastic, and the first and third gears having greater strength and having the same modulus exhibit a slightly smaller toothing than the second gear having greater elasticity.
5. (Withdrawn) The gear arrangement of claim 4, wherein teeth of the first, second and third gears are co-axially arranged next to one another.

Westphal.7276
Serial Number 10/647,912

6. (Withdrawn) The gear arrangement of claim 4, wherein the first, second and third gears arranged next to one another are slightly offset relative to one another.

7. (Withdrawn) The gear arrangement of claim 2, wherein the first, second and third gears each comprise a plurality of helical teeth with respect to the common shaft.

8. (Withdrawn) The gear arrangement of claim 7, wherein the first gear and the second gear sit on the common shaft in such a way that the first and second gears are able to turn relative to one another about their respective axes.

9. (Withdrawn) The gear arrangement of claim 8, wherein the first gear and the second gear are not directly connected to one another along their axial surfaces.

10. (Withdrawn) The gear arrangement of claim 9, wherein the first gear and the second gear are asymmetrically alignable relative to one another with respect to their toothing.

11.(Previously Presented) A transmission gear assembly that engages a cooperating gear, said transmission gear assembly comprising:

a first gear having a plurality of first gear teeth located along the radial periphery of said first gear; and

a second gear having a plurality of second gear teeth located along the radial periphery of said second gear;

wherein said first and second gears are operably positioned co-axially to allow independent

Westphal,7276
Serial Number 10/647,912

rotation of said first and second gears in the same direction with respect to each other, wherein said first gear is constructed from a first material and said second gear is constructed from a second material and said first gear has a greater elasticity than said second gear, such that in the absence of high loads said second gear is disengaged from the cooperating gear.

12.(Previously Presented) The transmission gear assembly of claim 11, wherein said first gear teeth and said second gear teeth are helically arranged adjacent to one another.

13.(Previously Presented) The transmission gear assembly of claim 11, wherein said first gear teeth and said second gear teeth are helically arranged offset to one another.

14.(Previously Presented) The transmission gear assembly of claim 11, wherein said first material comprises plastic and said second material is metallic.

15.(Withdrawn) The transmission gear assembly of claim 12, comprising:

a third gear positioned co-axially with respect to said first and second gears to allow independent rotation of said first, second and third gears in the same direction with respect to each other, said third gear being constructed of a material having the same elasticity of said first gear such that

16.(Withdrawn) The transmission gear assembly of claim 15, wherein said first and third gears are primarily plastic and said second gear is primarily metallic.

Westphal.7276
Serial Number 10/647,912

17.(Withdrawn) The transmission gear assembly of claim 11, comprising:

a third gear positioned on the axis to allow independent rotation of said first, second and third gears in the same direction with respect to each other around the axis, said third gear being constructed of a material having the same elasticity of said second gear.

18.(Previously Presented) A transmission gear assembly that engages a cooperating gear, said transmission gear assembly comprising:

a first gear having a plurality of first gear teeth located along the radial periphery of said first gear; and

a second gear having a plurality of second gear teeth located along the radial periphery of said second gear;

wherein said first and second gears are operably positioned co-axially to allow independent rotation of said first and second gears in the same direction with respect to each other, wherein said first gear is constructed from a first material and said second gear is constructed from a second material and said first gear has a greater elasticity than said second gear, such that in the absence of high torque said second gear is not engaged with the cooperating gear and during high torque said first gear yields and said second gear engages the cooperating gear.

19.(Previously Presented) The transmission gear assembly of claim 18, wherein said first gear is primarily plastic and said second gear is primarily metallic.

Westphal.7276
Serial Number 10/647,912

20.(Withdrawn) The transmission gear assembly of claim 18, comprising:

a third gear positioned on the axis to allow independent rotation of said first, second and third gears in the same direction with respect to each other around the axis, said third gear being constructed of a material having the same elasticity of said second gear, wherein absence of high torque said second gear is not engaged with the cooperating gear and during high torque said first and second gears yield to disengage from the cooperating gear and said second gear engages the cooperating gear.